

Notice of Allowability

Application No.

09/256,034

Examiner

John S. Chu

Applicant(s)

ANGELOPOULOS ET AL.

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/4/06.
2. ☒ The allowed claim(s) is/are 1-5, 18 and 20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 2/22/07.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

John S. Chu
Primary Examiner
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EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows: Cancel claims 9-17 and 19 as drawn to the non-elected claims elected without traverse on April 11, 2000.

REASONS FOR ALLOWANCE

2. The following is an examiner's statement of reasons for allowance: The claimed invention is drawn to the following:

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DEC 04 2006

1. (Currently amended) A method comprising:
disposing on a surface, a layer of polymeric resin material,
said layer of polymeric resin material having a thickness of between about 1000 and 10000 Å and
comprising an optically tuned planarizing layer, said tuned layer having an index of refraction layer (n)
from about 1.4 to about 2.1, and an extinction coefficient (k) from about 0.1 to 0.6 at 365, 248 193 and
157 nm comprising a polymeric resin,

said polymeric resin being selected from the group consisting of novolac/diazonaphthoquinone resin,
polysulfones, polyhydroxystyrene based materials, polyimide materials cast from solvents substantially
free of amines, and blends thereof, said resin containing a covalently bonded chromophore used to
modulate the optical properties of said material and a variety of wavelengths;

a polyfunctionalized crosslinking agent selected from the group consisting of mono-, di-, multi hydroxy
substituted methylphenols, aminoplasts, urea resins, glycoluril resins, melamines; and

a thermal acid generator comprising compounds that undergo catastrophic decomposition at a given
threshold temperature that results in the formation of one or more molecules of a strong acid;

disposing on said layer of polymeric resin material, a layer of resist material containing photosensitive
elements;

said layer of polymeric resin material having a crosslink density sufficiently high that said polymeric resin
material and said resist material do not substantially intermix;

said layer of polymeric resin material being thicker than said layer of resist material, and forming a
multilayer resist structure exhibiting sub 200 nm resolution,

said multilayer resist comprising a first layer having a thickness of between about 1000Å and 4000Å on a
second layer having a thickness between about 1000 Å and 3.0 µm.

Applicants have cancelled claim 6 wherein claim 6 is the only remaining claim
rejected.

Claims 1-5, 18 and 20 are allowed as indicated in the previous Office action,
which was mailed February 22, 2007. These claims are passed to issue.

Any comments considered necessary by applicant must be submitted no later than
the payment of the issue fee and, to avoid processing delays, should preferably

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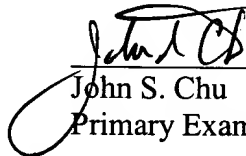
accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chu whose telephone number is (571) 272-1329. The examiner can normally be reached on Monday - Friday from 9:30 am to 6:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Cynthia Kelly, can be reached on (571) 272-1526

The fax phone number for the USPTO is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John S. Chu
Primary Examiner, Group 1700

J.Chu
March 14, 2007